

CLAIMS

What is claimed is:

- 1 1. A cache, comprising:
 - 2 a plurality of ways to store cache lines, each way to include a
 - 3 valid flag and a victim flag; and
 - 4 a control logic to make true a first victim flag of a first one of said
 - 5 ways when none of said valid flags is false.

- 1 2. The cache of claim 1, wherein said control logic is to make
2 false said first victim flag of said first one of said ways when an inner
3 cache to said cache requests a cache line of said first one of said ways.

- 1 3. The cache of claim 2, wherein said control logic is to make
2 true a second victim flag of a second one of said ways and send said
3 cache line to said inner cache.

- 1 4. The cache of claim 1, wherein said control logic is to
2 overwrite contents of said first one of said ways when said first victim
3 flag is true.

- 1 5. The cache of claim 1, wherein said victim flag is an encoded
2 number of one of said ways within a set.

- 1 6. The cache of claim 1, wherein said victim flag is a decoded
2 bit associated with one of said ways.

1 7. The cache of claim 1, wherein said valid flag is encoded in a
2 coherency field associated with one of said ways.

1 8. The cache of claim 1, wherein said valid flag is a decoded
2 bit associated with one of said ways.

1 9. A method, comprising:
2 selecting a first victim cache line from a set of cache lines within a
3 set of ways in an outer cache;
4 making true a first victim flag for said first victim cache line in a
5 first one of said set of ways; and
6 overwriting said first victim cache line in said first one of said set
7 of ways.

1 10. The method of claim 9, further comprising invalidating said
2 first victim cache line in an inner cache.

1 11. The method of claim 9, further comprising requesting said
2 first victim cache line from an inner cache and making false said first
3 victim flag.

1 12. The method of claim 11, further comprising sending said
2 first victim cache line to said inner cache and selecting a second victim
3 cache line in a second one of said set of ways.

1 13. The method of claim 12, further comprising making true a
2 second victim flag for said second victim cache line in said second one
3 of said set of ways responsive to a determination that no cache line in
4 said set of ways is invalid.

1 14. A system, comprising:
2 a cache including a plurality of ways to store cache lines, each
3 way to include a valid flag and a victim flag, and a control logic to make
4 true a first victim flag of a first one of said ways when none of said valid
5 flags is false;
6 a memory interface to connect said cache with a memory;
7 a first bus;
8 an input/output bus; and
9 an audio input/output device coupled to said input/output bus
10 to send data to said memory via said first bus and said memory
11 interface.

1 15. The system of claim 14, wherein said control logic is to
2 make false said first victim flag of said first one of said ways when an
3 inner cache to said cache requests a cache line of said first one of said
4 ways.

1 16. The system of claim 15, wherein said control logic is to
2 make true a second victim flag of a second one of said ways and send
3 said cache line to said inner cache.

1 17. The system of claim 14, wherein said control logic is to
2 overwrite contents of said first one of said ways when said first victim
3 flag is true.

1 18. A cache, comprising:
2 means for selecting a first victim cache line from a set of cache
3 lines within a set of ways in an outer cache;
4 means for making true a first victim flag for said first victim cache
5 line in a first one of said set of ways; and
6 means for overwriting said first victim cache line in said first one
7 of said set of ways.

1 19. The cache of claim 18, further comprising means for
2 invalidating said first victim cache line in an inner cache.

1 20. The cache of claim 18, further comprising means for
2 requesting said first victim cache line from an inner cache and means
3 for making false said first victim flag.

1 21. The cache of claim 20, further comprising means for
2 sending said first victim cache line to said inner cache and means for
3 selecting a second victim cache line in a second one of said set of ways.

1 22. The cache of claim 21, further comprising means for
2 making true a second victim flag for said second victim cache line in
3 said second one of said set of ways responsive to a determination that
4 no cache line in said set of ways is invalid.